



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2013-1059; Directorate Identifier 2013-NE-36-AD]**

**RIN 2120-AA64**

**Airworthiness Directives; Pratt & Whitney Canada Corp. Turboprop Engines**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** We propose to supersede Airworthiness Directive (AD) 2014-14-02, which applies to certain Pratt & Whitney Canada Corp. (P&WC) PW120, PW121, PW121A, PW124B, PW127, PW127E, PW127F, PW127G, and PW127M turboprop engines. AD 2014-14-02 requires removal of the O-ring seal from the fuel manifold fitting. Since we issued AD 2014-14-02, we received reports of fuel seepage past the metal-to-metal sealing surfaces of the fuel nozzle and fuel manifold flow adapter. This proposed AD would require replacement of the fuel nozzle and the fuel manifold flow adapter. We are proposing this AD to prevent in-flight fuel leakage, engine fire, damage to the engine, and damage to the airplane.

**DATES:** We must receive comments on this proposed AD by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.

- Fax: 202-493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.
- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed AD, contact Pratt & Whitney Canada Corp., 1000 Marie-Victorin, Longueuil, Quebec, Canada, J4G 1A1; phone: 800-268-8000; fax: 450-647-2888; Web site: [www.pwc.ca](http://www.pwc.ca). You may view this service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

#### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2013-1059; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Barbara Caufield, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7146; fax: 781-238-7199; email: [barbara.caufield@faa.gov](mailto:barbara.caufield@faa.gov).

## **SUPPLEMENTARY INFORMATION:**

### **Comments Invited**

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2013-1059; Directorate Identifier 2013-NE-36-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

### **Discussion**

On June 30, 2014, we issued AD 2014-14-02, Amendment 39-17896 (79 FR 39958, July 11, 2014), (“AD 2014-14-02”), for certain P&WC PW120, PW121, PW121A, PW124B, PW127, PW127E, PW127F, PW127G, and PW127M turboprop engines. AD 2014-14-02 requires removal of the O-ring seal from the fuel manifold fitting. AD 2014-14-02 resulted from reports of fuel leaks at the interface between the fuel manifold and the fuel nozzle that resulted in engine fire. We issued AD 2014-14-02 to prevent in-flight fuel leakage, engine fire, damage to the engine, and damage to the airplane.

### **Actions Since AD 2014-14-02 Was Issued**

Since we issued AD 2014-14-02, we have received reports of fuel seepage past the metal to metal sealing surfaces of the fuel nozzle and fuel manifold flow adapter. The manufacturer has since redesigned the fuel manifold flow adapter to prevent in-flight fuel

leakage. This redesign incorporates new internal diameters on the fuel manifold adapters and the fuel nozzles.

#### **Related Service Information under 1 CFR Part 51**

We reviewed P&WC SB No. PW100-72-21861, dated November 21, 2014, which identifies the final fuel nozzle configuration. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section of this NPRM.

#### **Other Related Service Information**

P&WC SB No. PW100-72-21861, dated November 21, 2014, refers to the following additional SBs that provide the final fuel nozzle configuration: P&WC SB No. PW100-72-21803, Revision No. 5, dated November 21, 2014, P&WC SB No. PW100-72-21860, Revision No. 2, dated November 21, 2014, and P&WC SB No. PW100-72-21841, Revision No. 3, dated December 22, 2014. This service information is available by the means identified in the ADDRESSES section of this NPRM.

#### **FAA's Determination**

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

#### **Proposed AD Requirements**

This proposed AD would require replacement of the fuel nozzle and the fuel manifold flow adapter.

#### **Costs of Compliance**

We estimate that this proposed AD would affect about 150 engines installed on airplanes of U.S. registry. We also estimate that it would take about 2.5 hours per engine to perform the replacement required by this proposed AD. The average labor rate is \$85

per hour. The cost of a fuel nozzle manifold replacement is \$146,594. Based on these figures, we estimate the cost of the proposed AD on U.S. operators to be \$22,020,975.

### **Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

We have determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that the proposed regulation:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction, and

(4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

#### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

#### **The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

#### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by removing Airworthiness Directive (AD) 2014-14-02, Amendment 39-17896 (79 FR 39958, July 11, 2014), and adding the following new AD:

**Pratt & Whitney Canada Corp.:** Docket No. FAA-2013-1059; Directorate Identifier 2013-NE-36-AD.

#### **(a) Comments Due Date**

The FAA must receive comments on this AD action by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

#### **(b) Affected ADs**

This AD replaces AD 2014-14-02, Amendment 39-17896 (79 FR 39958, July 11, 2014).

#### **(c) Applicability**

This AD applies to Pratt & Whitney Canada Corp. (P&WC) PW120, PW121, and PW121A turboprop engines with post SB 21610 configuration; PW124B, PW127, PW127E, and PW127F turboprop engines with post SB 21607 configuration; PW127E

and PW127F turboprop engines with serial numbers (S/Ns) PCE-EB0366 and earlier; PW127G turboprop engines with S/Ns PCE-AX0275 and earlier; and PW127M turboprop engines with S/Ns PCE-ED0810 and earlier.

**(d) Unsafe Condition**

This AD was prompted by reports of fuel seepage past the metal-to-metal sealing surfaces of the fuel nozzle and fuel manifold flow adapter. We are issuing this AD to prevent in-flight fuel leakage, engine fire, damage to the engine, and damage to the airplane.

**(e) Compliance**

Comply with this AD within the compliance times specified, unless already done. Within 1,500 flight hours after the effective date of this AD, or at the next engine shop visit, whichever occurs first:

- (1) Remove the O-ring seal from the fuel manifold fitting,
- (2) Remove fuel manifold flow adapter, part number (P/Ns) 3059754-01, 3059757-01, and 3059760-01; and
- (3) Install a fuel nozzle gasket and fuel manifold flow adapter that are eligible for installation in accordance with paragraphs 3.A, 3.B, and 3.C of P&WC SB No. PW100-72-21861, dated November 21, 2014.

**(f) Installation Prohibition**

After the effective date of this AD, fuel manifold adapter, P/Ns 3059754-01, 3059757-01, and 3059760-01, and fuel manifold gasket, P/N 3079354-01, are not eligible for installation in any engine.

**(g) Definition**

For the purpose of this AD, an engine shop visit is the induction of an engine into the shop for maintenance involving the separation of pairs of major mating engine

flanges. The separation of engine flanges solely for the purpose of transportation without subsequent engine maintenance does not constitute an engine shop visit.

**(h) Alternative Methods of Compliance (AMOCs)**

The Manager, Engine Certification Office, FAA, may approve AMOCs to this AD. Use the procedures found in 14 CFR 39.19 to make your request. You may email your request to: ANE-AD-AMOC@faa.gov.

**(i) Related Information**

(1) For more information about this AD, contact Barbara Caufield, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7146; fax: 781-238-7199; email: barbara.caufield@faa.gov.

(2) Refer to MCAI Transport Canada AD CF-2014-41, dated November 26, 2014, for related information. You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating it in Docket No. FAA-2013-1059.

(3) P&WC SB No. PW100-72-21861, dated November 21, 2014; P&WC SB No. PW100-72-21803, Revision No. 5, dated November 21, 2014; P&WC SB No. PW100-72-21860, Revision No. 2, dated November 21, 2014; and P&WC SB No. PW100-72-21841, Revision No. 3 dated December 22, 2014, can be obtained from Pratt & Whitney Canada, using the contact information in paragraph (i)(4) of this AD.

(4) For service information identified in this AD, contact Pratt & Whitney Canada Corp., 1000 Marie-Victorin Blvd., Longueuil, Quebec, Canada, J4G 1A1; phone: 800-268-8000; fax: 450-647-2888; Web site: [www.pwc.ca](http://www.pwc.ca).

(5) You may view this service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.



Issued in Burlington, Massachusetts, on May 19, 2015.

Carlos A. Pestana,  
Acting Directorate Manager, Engine & Propeller Directorate,  
Aircraft Certification Service.

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